



Take Test: Remote Invocation

Test Information

Description

Instructions

Multiple Attempts This test allows multiple attempts.

Force Completion This test can be saved and resumed later, unless it is a timed test. Once you start a timed test, the timer continues.

🚩 Question Completion Status:

Save All Answers

Save and Submit

QUESTION 1

10 points

Save Answer

In terms of call semantics, which of the following is true about "at-least-once"?

- ☐ a. It has duplication filtering.
- ☐ b. It retransmits the reply in case of failure, there is no re-execution.
- ☐ c. It doesn't support retransmit request.
- ☐ d. All of the above.
- ☐ e. None of the above.

QUESTION 2

10 points

Save Answer

Which one of the following statements is most likely not true concerning Java RMI?

- ☐ a. Servants can be remotely created.
- ☐ b. A binder maintains a table containing mappings from textual names to object references.
- ☐ c. When both Java VMs are on the same host, a binder is not needed.
- ☐ d. Garbage collection requires keeping a count of all remote references as well as local ones.
- ☐ e. At-most-once semantics are guaranteed.

QUESTION 3**10 points****Save Answer**

A serializable class in Java:

- ☐ a. Ensures that the object can be transformed into a form that is suitable for storing on disk or transmitting in a message.
- ☐ b. Allows remote object references to be registered with the RMI registry name server.
- ☐ c. Ensures that valid remote references can be created for that object.
- ☐ d. Guarantees that an object is accessed by only one thread at a time.
- ☐ e. Has the ability to communicate with remote objects using sockets.

QUESTION 4**10 points****Save Answer**

How are arguments passed in Java RMI?

- ☐ a. Serialized objects as copy, all others as reference.
- ☐ b. Call by copy only.
- ☐ c. Remote objects as reference, all other as copies.
- ☐ d. Call by reference only.
- ☐ e. Serialized objects as reference, all other as copy.

Question Completion Status:

QUESTION 5**10 points****Save Answer**

What is the purpose of the marshaling procedure?

- ☐ a. To compress data structures.
- ☐ b. To protect an application from unauthorized requests.
- ☐ c. To encode application layer structures in an external form.
- ☐ d. To ensure the integrity of the arguments passed during a remote method invocation.
- ☐ e. Consistency checking of data types.

QUESTION 6**10 points****Save Answer**

What level of transparency is provided by method invocation in Java RMI?

- ☐ a. Access transparency.
- ☐ b. Neither access nor location transparency.
- ☐ c. Location transparency.
- ☐ d. Both access and location transparency.

QUESTION 7**10 points****Save Answer**

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In the context of RMI, which of the following is required for the communication of a client with a remote object to take place?

- ☐ a. Stub.
- ☐ b. Skeleton.
- ☐ c. Message queue.
- ☐ d. All of the above.
- ☐ e. Both a) and b).

QUESTION 8**10 points****Save Answer**

Can we implement an RPC system with exactly-once semantics in an asynchronous system with non-failing nodes but unreliable networks?

- ☐ a. No, the unreliability of the network means only maybe semantics can be provided.
- ☐ b. No, we can only achieve ⚙ Question Completion Status:
- ☐ c. Yes, simply resend the request until an acknowledgment is received.
- ☐ d. No, since messages can be lost a reply is not guaranteed to reach the client.
- ☐ e. Yes, if the client keeps resending a uniquely tagged request until a reply is received and a server keeps track of all handled request in order not to duplicate a request.

QUESTION 9**10 points****Save Answer**

Which call semantic is provided by Java RMI?

- ☐ a. Exactly-once semantic.
- ☐ b. At-least-once semantic.
- ☐ c. At-most-once semantic .
- ☐ d. Both maybe and at-most-once semantics.
- ☐ e. Maybe semantic.

QUESTION 10**10 points****Save Answer**

Which of the following is not true regarding RMI?

- ☐ a. A client stub is responsible for forwarding method calls to the actual object on the server via the network.
- ☐ b. A client stub is responsible for unmarshaling the arguments of a remote method call into bytes.
- ☐ c. A client stub is responsible for marshaling the return value of a remote method call.
- ☐ d. None of the above.

☐ e. Both b) and c) are not true.

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